Data science for insurance

Harness data to meet customers’ changing needs while effectively assessing and protecting against new horizons of risk.

Getting it right in insurance is harder than ever. The complexity of risk is rising due to climate change, terrorism, and cybercrime. Smart homes and autonomous vehicles are creating new, complex industry dynamics and unprecedented considerations when crafting policies. The analytics behind today’s underwriting, valuation, and fraud detection need to be re-invented to be lightning fast, laser accurate, and adaptable to changing demands. Failure to deliver means, at best, lower profit and dissatisfied customers. At worst, it exposes insurers to massive losses. RapidMiner enables insurance companies to harness their data to meet customers’ changing needs while effectively assessing and protecting themselves against new horizons of risk.

Data science helps improve insurance in these areas:

**Risk assessment & price optimization**
Develop a more insightful understanding of existing and emerging risks by combining machine learning and vast new data sets from vehicles, homes, and wearables. This understanding enables insurers to set prices more precisely and even at the individual level, maximizing both client appeal and company profitability. Create a clearer picture of company-wide risk exposure to make informed portfolio decisions.

**Underwriting and claims processing**
Automate routine transactions to increase agility, reduce costs, and improve customer satisfaction. Many policy applications and claim submissions can be processed without human intervention. Machine learning-driven algorithms look for signs of abnormality or concern and fast-track straightforward cases or add necessary contextual data where needed.

**Fraud detection**
Data science can be an important defense against application and claims fraud. Machine learning can look across massive data sets and transactions to detect and flag potential fraudulent and/or duplicate claims better than relying only on human review. New data sources—such as digital and social channels—can also be used for evidence of fraudulent behavior after a claim is made.

$40B
of insurance fraud every year

400
basis point profit boost when insurers use analytics

90%
of insurers can build a business case for data science

30%
annual growth in cyber insurance premiums, despite insurers not being confident in how to price policies
Insurance benefits from data science:

**Drive revenue**
- Optimize pricing to price sensitivity by geography and individual clients
- Understand customer segments to expand multichannel strategies
- Assess the long-term value of each customer to personalize service

**Cut costs**
- Streamline claims processing by automating data-dependent steps
- Use business process mining to find opportunities to be more effective
- Streamline underwriting to achieve real-time speed, cutting costs and delivering better service

**Avoid risks**
- Immediately identify fraudulent and unwarranted claims or policy applications
- Reduce risk & ensure compliance with precise and efficient scoring

Data science enables an innovative digital-only insurance model at nexible

Nexible is an auto insurance provider based in Germany that operates in a digital-only model. The company has automated practically every step in its process, so that customers don’t need to make a single phone call to apply for, obtain, and submit a claim for nexible auto insurance. These streamlined operations are enabled by the company’s embrace of data science and machine learning, and powered by their use of the RapidMiner platform. With RapidMiner, nexible is continuously capturing and cleansing data in order to build and refine machine learning models that drive business, automate routine processes, assess risks, and set prices.

How RapidMiner optimizes insurance

The RapidMiner platform helps insurance companies recognize and unlock previously unseen potential for existing and new operations. Using the power of machine learning without requiring experienced data science and data engineering teams, insurance companies are able to better assess risk and price policies, automate routine processes, and identify signs of fraud, enabling them to drive greater revenue, reduce costs, and avoid unanticipated risks.

For those driven to accelerate the pace of transformation, RapidMiner is the enterprise-ready data science platform that amplifies the collective impact of your people, expertise, and data for break-through competitive advantage. RapidMiner’s data science platform supports all analytics users across the full AI lifecycle. The RapidMiner Academy and Center of Excellence methodology ensure customers are successful, no matter their experience or resource levels. Since 2007, more than 1 million professionals and 40,000 organizations in over 150 countries have relied on RapidMiner to bring data science closer to their business.